

REMARKS

Pursuant to the present amendment, claims 1 and 13-30 have been amended and new claims 49-73 have been added. Thus, claims 1-30 and 49-73 are pending in the present application. No new matter has been introduced by way of the present amendment. Reconsideration of the present application is respectfully requested.

As an initial matter, claims 14-22 and 24-30 were amended to correct the preamble language to the various dependent claims to agree with the preamble set forth in each of the respective independent claims associated with the dependent claims. Thus, in these claims, the word "device" was replaced with "transistor" such that the claim would agree with its respective independent claim. It is believed that such amendments to these claims is formal and nature and not directed to any issue related to patentability.

In the Office Action, claims 1-5, 7-11, 13-16, 18-21, 23-25 and 27-29 were rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Riccobene (U.S. Patent No. 6,515,333). Claims 6, 12, 17, 22, 26 and 30 were rejected under 35 U.S.C. § 103 as allegedly being unpatentable over Riccobene. Applicants respectfully traverse the Examiner's rejections.

As an initial matter, it is noted that Riccobene is assigned to the assignee of the present application. According to MPEP § 706.02(I)(1), "effective November 29, 1999, subject matter which was prior art under former 35 U.S.C. 103 via 35 U.S.C. 102(e) is now disqualified as prior art against the claimed invention if that subject matter the claimed invention 'were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.'" The present application was filed on or after November 29, 1999. Furthermore, the present application and the Riccobene patent were, at the time the

present invention was made, owned by the same entity or subject to an obligation of assignment to the same entity, namely Advanced Micro Devices. Thus, Applicants respectfully submit that the Riccobene patent is not available as prior art in any obviousness determination.

As the Examiner well knows, an anticipating reference by definition must disclose every limitation of the rejected claim in the same relationship to one another as set forth in the claim. *In re Bond*, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990). To the extent the Examiner relies on principles of inherency in making the anticipation rejections in the Office Action, inherency requires that the asserted proposition necessarily flow from the disclosure. *In re Oelrich*, 212 U.S.P.Q. 323, 326 (C.C.P.A. 1981); *Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1463-64 (Bd. Pat. App. & Int. 1990); *Ex parte Skinner*, 2 U.S.P.Q.2d 1788, 1789 (Bd. Pat. App. & Int. 1987); *In re King*, 231 U.S.P.Q. 136, 138 (Fed. Cir. 1986). It is not enough that a reference could have, should have, or would have been used as the claimed invention. “The mere fact that a certain thing may result from a given set of circumstances is not sufficient.” *Oelrich*, at 326, quoting *Hansgirg v. Kemmer*, 40 U.S.P.Q. 665, 667 (C.C.P.A. 1939); *In re Rijckaert*, 28 U.S.P.Q.2d 1955, 1957 (Fed. Cir. 1993), quoting *Oelrich*, at 326; see also *Skinner*, at 1789. “Inherency ... may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.” *Skinner*, at 1789, citing *Oelrich*. Where anticipation is found through inherency, the Office’s burden of establishing prima facie anticipation includes the burden of providing “...some evidence or scientific reasoning to establish the reasonableness of the examiner’s belief that the functional limitation is an inherent characteristic of the prior art.” *Skinner* at 1789. This is a very exacting requirement wherein

each specific limitation of a claimed invention must be exactly disclosed in the prior art reference.

Pursuant to the present amendment, independent claims 1, 13 and 23 have been amended to reflect that the multiple thickness buried oxide layer or buried oxide layer (depending on the claim) has a substantially planar upper surface. Riccobene does not disclose such a structure. In Riccobene, the upper surface of the buried oxide layer 16 has a stepped upper surface due to the presence of the cavity 17 which is later filled with the active layer. Of course, it should be understood that, in stating that the buried oxide layer now set forth in independent claims 1, 13 and 23 has a substantially planar upper surface, it is meant that the upper surface has a surface planarity that is consistent with known manufacturing techniques used to manufacture such structures. Of course, a substantially planar upper surface as now claimed would not include a device wherein a buried oxide layer had a stepped upper surface configuration like that disclosed in Riccobene. However, exact planarity down to the microscopic level is not required by use of the phrase substantially planar upper surface. As thus amended, it is respectfully submitted that independent claims 1, 13 and 23, and all claims depending therefrom, are not anticipated by Riccobene. Thus, since Riccobene cannot be applied against the present application in the context of a 103 analysis, it is respectfully submitted that claims 1-30 are in condition for immediate allowance.

New independent claims 49 and 52 have been added to further define Applicants' invention. Both of these independent claims recite, among other things, that the active layer has a substantially planar lower surface. Again, it is believed that Riccobene does not disclose such a structure. That is, in Riccobene, the lower surface of the active layer has a stepped

configuration due to the formation of the active layer in the trench 17. As with the buried oxide layer amendment set forth above, by reciting that the active layer has a substantially planar lower surface, it is not intended that the planarity be examined on a microscope level. However, by reciting that the lower surface of the active layer is substantially planar, it is intended to reflect that such a surface would not include the stepped lower surface of the active layer depicted in Riccobene. Accordingly, it is believed that new claims 49-54 are likewise in condition for immediate allowance.

New independent claim 55 is original dependent claim 21 re-presented in independent form. It is believed that this claim is likewise allowable over Riccobene. More specifically, independent claim 55 requires that the first section of the buried oxide layer be substantially aligned with the gate electrode of the transistor. Such a structure is not disclosed in Riccobene. In Riccobene it appears that the trench 17 is not aligned with the gate 34. See Figure 3I. In the illustrative example disclosed in Riccobene, the trench 17 is formed prior to the formation of the gate 34. See Figures 3H-3I and the associated discussion. In any event, the reduced thickness section of the buried oxide layer disclosed in Riccobene is not substantially aligned with respect to the gate electrode of the transistor. Accordingly, it is respectfully submitted that claim 55 is likewise in condition for allowance.

New claims 56-61 are provided to further define Applicants' invention. For example, claim 56 is essentially original claim 1 with the additional limitation of a doped back gate region positioned at least partially in the bulk substrate under the multiple thickness buried oxide layer. Support for this limitation can be found in the specification at, for example, page 12, line 4, through page 13, line 5, and Figures 4A-4C. It is respectfully submitted that Riccobene does not

disclose a structure comprising such a doped back gate region. Accordingly, it is respectfully submitted that independent claim 56, and all claims dependent therefrom, are in condition for allowance. The back gate region limitation is also present in new independent claims 58 and 60. Of course, the Examiner will need to consult the exact language of each of those claims in their entirety. Accordingly, it is believed that new independent claims 58 and 60, and all claims depending therefrom, are likewise in condition for immediate allowance. Accordingly, it is respectfully submitted that new claims 56-61 are in condition for allowance.

New claims 62-66 have been added to further limit various independent claims that are already believed to be allowable. Specifically, claims 62, 63, 64, 65 and 66 have been added to further add the limitation regarding a doped back gate region to independent claims 1, 13, 23, 49 and 52, respectively. Accordingly, it is believed that new claims 62-66 are likewise in condition for immediate allowance.

In the Office Action, the Examiner indicated that claims 6, 12, 17, 22, 26 and 30 were rejected under 35 U.S.C. § 103 in view of Riccobene. However, as indicated above, Riccobene cannot be applied against the present application in the context of a Section 103 analysis. Thus, pursuant to the present amendment, new independent claims 67, 68, 70, 72 and 73 have been added to re-present original dependent claims 6, 17, 22, 26 and 30 in independent form. Thus, it is believed that these independent claims, and all claims depending therefrom, are in condition for immediate allowance. Accordingly, claims 67-73 are believed to be in condition for immediate allowance.

In view of the foregoing, it is respectfully submitted that all pending claims are in condition for allowance. The Examiner is invited to contact the undersigned attorney at

(713) 934-4055 with any questions, comments or suggestions relating to the referenced patent application.



Date: March 30, 2005

Respectfully submitted,

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A handwritten signature in black ink, appearing to read "J. Mike Amerson", written over a horizontal line.

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